

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) Apparatus comprising a vessel and an injection device inside said vessel for carrying out separate injection of ~~two~~ first and second fluids which are in two different physical states~~[[,]]~~ or which are not miscible, and for homogeneous distribution in the vessel of at least one of the ~~two~~ fluids downstream of said device, ~~the first fluid being injected into the vessel at at least one point level with said device~~, said device comprising a chamber (5) which is supplied by the first fluid, and which chamber comprises ~~comprising~~ orifices (7, 8) for the passage of the first fluid, said device further comprising elongated tubes extending downwardly through said chamber, said tubes being imperforate within said chamber and having free ends outside said chamber ~~said chamber (5) also being imperviously traversed by tubes (4) or conduits with a free end acting as a passage for the second fluid through said vessel~~ chamber, said apparatus further comprising means for introducing the first fluid into the chamber.

2. (Currently Amended) Apparatus according to claim 1, wherein said vessel is a distillation column in which the first fluid is essentially liquid and the second fluid is essentially gaseous, and ~~in~~ said apparatus further comprising means such that said essentially gaseous fluid traverses said device from downstream to upstream via said tubes ~~conduits~~ in said ~~column~~ chamber, and in that the flow of the essentially gaseous fluid is upwards and the flow of essentially liquid fluid is downwards.

3. (Currently Amended) Apparatus according to claim 1, wherein said vessel is a reactor in which at least one bed of granular solid (12) is disposed downstream of said injection device and ~~in that~~ including means whereby the flows of the two fluids are downwards and co-current, and ~~in that~~ the second fluid is injected into the vessel at a ~~at least one~~ point upstream of said device.

4. (Cancelled)

5. (Previously Presented) Apparatus according to claim 1, wherein said vessel comprises a head section, and said device is placed close to the head section of said vessel.

6-7. (Cancelled)

8. (Previously Presented) Apparatus according to claim 1, comprising tubes (4) extending below the chamber (5) by a distance h_t (10).

9. (Currently Amended) Apparatus according to claim 8, in which said distance h_t (10) is ~~in the range~~ 1 to 100 mm.

10. (Currently Amended) Apparatus according to claim 3, in which the distance between the end (13) of the tubes (4) and the top of the bed (12) is ~~in the range~~ 0 to about 50 mm, 0 excluded.

11. (Previously Presented) Apparatus according to claim 1, in which said orifices allowing passage of the first fluid are holes distributed between the tubes for injecting the second fluid.

12. (Previously Presented) Apparatus according to claim 1, in which said orifices for passage of the first fluid are annular slots located around the tubes for injecting the second fluid.

13. (Cancelled)

14. (Previously Presented) Apparatus according to claim 1, wherein said vessel is a distillation column.

15-20. (Cancelled)

21. (Currently Amended) An apparatus according to claim 1, wherein said vessel is a distillation column comprising a head section, in which the first fluid is essentially liquid and the second fluid is essentially gaseous, the essentially gaseous fluid traverses said device from

downstream to upstream via said tubes ~~conduits~~ in said column, wherein said essentially gaseous fluid flows upwards and the essentially liquid fluid flows downwards, wherein said device is placed close to the head section of said vessel, the distance between the end of said tubes (4) and the top of at least one bed of granular solid (12) is ~~in the range~~ 0 to about 50 mm, 0 excluded, and said orifices are annular slots located around the tubes for inserting said second fluid.

22. (Currently Amended) An apparatus according to claim 1, wherein said vessel is a reactor comprising a head section, in which at least one bed of granular solid (12) is disposed downstream of said injection device, the flows of the two fluids are downwards and co-current, the second fluid is injected into the vessel at a least one ~~one~~ point upstream of said device, said device is placed close to the head section of said vessel, and the distance between the end of said tubes (4) and the top of said bed (12) is ~~in the range~~ 0 to about 50 mm, 0 excluded.

23. (Cancelled)

24. (New) An apparatus according to claim 1, wherein the device is located at a certain height within the vessel and where the means for introducing the first fluid is located at about said certain height.